

ABSTRACT

A tailored response cascaded integrator comb digital filter is disclosed which has a cascaded integrator structure, a cascaded comb structure, a first rate change component, a second rate change component and can additionally include a resonator. The improved structure achieves greater bandwidth without requiring higher sampling rates. In an additional embodiment, a pre-decimated cascaded integrator filter section for a cascaded integrator comb digital filter is disclosed as having a data rate change component and a first integrator structure receiving data at the rate established by the data rate change component and modifying the received data. The pre-decimated filter section can also include a second integration structure. The pre-decimate structure outputs data equivalent to data that would be output by a post-decimated cascaded integrator structure having an equal number of cascaded integrator stages.